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AI A Modern Approach Nature Magazine AlphaGo Zero  
paper [1]

AlphaGo leukotomy

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talent pool

talent pool

[illegible]

Karl Raimund Popper

Marvin Minsky   The Emotion Machine   emotion   animal  
liberal arts   mathematics   sciences

AI: A Modern Approach  
Turing Machine

Marvin Minsky AlphaGo Zero paper  
superhuman superhuman

Technological Singularity [2]

[illegible]

liberal arts – natural languages – philosophies

# AlphaGo 比赛

Deepmind [4]

AlphaGo Master 四四四四四四四四 AlphaGo Master 四四四四 AlphaGo Master 四四四四四四  
四四四四四四四四四四四四四四四四 AlphaGo Zero 四四 AlphaGo Master 四四 AlphaGo Master  
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AlphaGo Zero 10000 AlphaGo Master 10000 AlphaGo Zero 10000000[5] 1000000  
AlphaGo Master 10000000000 16 1000000 AlphaGo Zero 10000000000 18 1000000  
AlphaGo Zero 100 14 16 100 45 100000000000000

1 Nature Magazine AlphaGo Deepmind AlphaGo Zero  
AlphaGo Master

2) AlphaGo Zero local trap  
AlphaGo Zero Superhuman

[AlphaGo Zero](#) [AlphaGo Master](#) [AlphaGo Master](#) [AlphaGo Master](#) [6] [Nature Magazine](#) [AlphaGo Zero paper](#) [AlphaGo Master](#) [deep-learning](#)

AlphaGo Zero AlphaGo Master AlphaGo Master

AlphaGo Zero [7] game

[illegible]

superhuman Technological Singularity  
Demis Hassabis AlphaGo

AlphaGo Deepmind team  
AlphaGo

AlphaGo

AlphaGo Zero superhuman [8]  
superhuman  
superhuman deep-learning reinforcement superhuman

AlphaGo Zero 与 AlphaGo Master 的  
AlphaGo Master 与 superhuman 的  
AlphaGo Master 与 60 个  
AlphaGo Master 与 superhuman 的  
AlphaGo Master 与  
AlphaGo Zero 与 superhuman 的  
superhuman 的

AlphaGo [9]

Turing Machine → deep-learning → AlphaGo → AlphaGo Zero → AlphaGo Master

AlphaGo Zero → AlphaGo Zero

Deep-learning credit reinforcement  
local trap AlphaGo

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[REDACTED] [1]

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Turing Machine  
 Turing Machine local trap Universal approximation

Socratic method

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Alan Turing, Geoffrey Hinton, Demis Hassabis, AlphaGo

Demis Hassabis and AlphaGo [13] and Geoffrey Hinton

Turing Machine and Geoffrey Hinton Turing Machine Alan Turing

Dialogue Concerning the Two Chief World Systems [14] Socratic method [15]

The Sceptical of Chemist

On the Origin of Species

[16]

[17]

## Leukotomy BRIAN Initiative

Leukotomy

1 personalities mental diseases personalities BRAIN Initiative project

2 leukotomy Leukotomy BRAIN Initiative AlphaGo

3 personality intelligence Walter Freeman personality intelligence

BRAIN Initiative project NIH BRAIN 2025 Report “there is general agreement that types can be defined provisionally by invariant and generally intrinsic properties” invariant agreement

insights“envision an integrated, systematic census of neuronal and glial cell types”dynamic brain mapping “Link brain activity to behavior”“Produce conceptual foundations for understanding the biological basis of mental processes”mental processes behavior

BRAIN Initiative project personality intelligence brain mapping personality intelligence hidden assumptions

personality intelligence

BRAIN Initiative project brain mapping mental diseases personality intelligence leukotomy

leukotomy AlphaGo

personality intelligence mental diseases

BRAIN Initiative brain mapping human level intelligence personalities intelligence mental diseases BRAIN Initiative neurosciences AlphaGo generic human intelligence AlphaGo neurosciences [18]

AlphaGo Master AlphaGo Zero AlphaGo AlphaGo Master AlphaGo

AlphaGo

Technological Singularity BRAIN Initiative project Technological Singularity baseless

AlphaGo Zero achieved superhuman performance Demis Hassabis AlphaGo

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[4] 碁盤 Cracking Go 碁盤 Deep Blue 碁盤 AlphaGo 碁盤 AlphaGo 碁盤

[5] <http://www.alphago-games.com/> AlphaGo Zero AlphaGo Zero  
<https://www.101weiqi.com/chessbook/player/38348/>

[12] 

AlphaGo 2016

[14] Dialogue Concerning the Two Chief Word Systems 对话 Socratic Method  
 对话 Socratic Method  
 对话

AlphaGo

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[15] AlphaGo  
AlphaGo

AlphaGo  
BRAIN Initiative project

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[17] [\[17\]](#)

I do not cross the boundary between sciences and religions; Gödel's  
theorems suggest metaphysics from humans may not work

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[18] [https://www.youtube.com/watch?v=8v3tXUwU450](#)  
AlphaGo 战胜李世石